

## 8ICEG Invited Lecture



### **Prof. Dr.-Ing. Rainer Stegmann**

Director of Institute of Waste Resources Management  
(retired)

Hamburg University of Technology, Hamburg, Germany

### **Invited Lecture Title**

Development of landfill management in the last 30 years  
*[09:50 - 10:20 , Wednesday 31<sup>st</sup> Oct. 2018]*

### **Biography**

Prof. Dr.-Ing Rainer Stegmann is a retired Professor of the Hamburg University of Technology in Hamburg, Germany. He holds a Dipl.-Ing. degree in Civil Engineering from the Technical University in Braunschweig, Germany, where he also obtained his doctorate (Dr.- Ing.) degree. In 1982 he became Professor at the Institute of Environmental Science at the Hamburg University of Technology, Germany and from 1991 he was the Director of the Institute of Waste Resources Management.

Rainer Stegmann is one of the founding members of the International Waste Working Group, IWWG, and he is partner of the Consultancy for Waste Management, Prof. Stegmann and Partner in Hamburg, Germany. He published more than 300 papers and edited 5 books.

Contact: [stegmann@tuhh.de](mailto:stegmann@tuhh.de)

### **Abstract**

Landfilling often is not regarded as a technically and operationally highly demanding waste management option as e.g. incineration. In many cases landfills are seen as a cheap way to get rid of the waste. Mistakes in the design and operation often may become relevant after many years or decades and remediation will be in general become very costly.

Siting, lining and drainage are key factors for the long-term functionality of a landfill. It always has to be kept in mind that these systems have to be operational “forever”.

Landfills have to be operated in a way that the biologically degradable waste is degraded in a relatively short time (few decades after landfill closure); by these means the emission potential will be significantly reduced. Measures to reduce the aftercare phase are mechanical- biological pre-treatment and in-situ aeration.

Important part of landfill operation is aftercare and release of a landfill from aftercare. Under which conditions can a landfill be released and does that mean that then no more care will be necessary?

Open questions are also how to deal with high water levels and temperatures in landfills. Another important issue is the question how the bottom drainage system can be kept functional over long periods of time (avoid clogging and collapsing of drain pipes) and in case of damage how they can be repaired or substituted.